



STATE OF IDAHO  
DEPARTMENT OF  
ENVIRONMENTAL QUALITY

1410 NORTH HILTON • BOISE, IDAHO 83706 • (208) 373-0502

JAMES E. RISCH, GOVERNOR  
TONI HARDESTY, DIRECTOR

July 14, 2006

**Certified Mail No. 7005 1160 0000 1550 6285**

Mr. Dale Eldridge  
Director of Facilities  
Micron Technology, Inc.  
8000 S. Federal Way  
P. O. Box 6  
Boise, ID 83707-0006

RE: Facility ID No. 027-00095, Micron Technology, Inc., Nampa  
Final Permit Letter

Dear Mr. Eldridge:

The Idaho Department of Environmental Quality (DEQ) is issuing Permit to Construct (PTC) No. P-060013 to Micron Technology, Inc. (MTI), in accordance with IDAPA 58.01.01.175 through 181 and 200 through 228 (Rules for the Control of Air Pollution in Idaho).

This permit is based on your permit application received on March 27, 2006, and the application revision received May 25, 2006. This permit is effective immediately. This permit does not release MTI from compliance with all other applicable federal, state, or local laws, regulations, permits, or ordinances.

A representative of the Boise Regional Office will contact you regarding a meeting with DEQ to discuss the permit terms and requirements. DEQ recommends the following representatives attend the meeting: your facility's plant manager, responsible official, environmental contact, and any operations staff responsible for day-to-day compliance with permit conditions.

Pursuant to IDAPA 58.01.23, you, as well as any other entity, may have the right to appeal this final agency action within 35 days of the date of this decision. However, prior to filing a petition for a contested case, I encourage you to call Bill Rogers at (208) 373-0502 to address any questions or concerns you may have with the enclosed permit.

Sincerely,

Martin Bauer, Administrator  
Air Quality Division

MB/ZK/bf

Permit No. P-060013

Enclosures

c:      Leonard Herr, Boise Regional Office  
         Bill Rogers, Permit Coordinator  
         Zach Klotovich, Permit Writer  
         Marilyn Seymore/ Pat Rayne, Air Quality Division  
         Laurie Kral, US EPA Region 10  
         Permit Binder  
         Source File  
         Phyllis Heitman (Ltr Only)  
         Reading File (Ltr Only)



**Air Quality  
PERMIT TO CONSTRUCT**

**State of Idaho  
Department of Environmental Quality**

**PERMIT No.: P-060013**

**FACILITY ID No.: 027-00095**

**AQCR: 64**

**CLASS: SM**

**SIC: 3674**

**ZONE: 11**

**UTM COORDINATE (km): 537.5, 4827.2**

**1. PERMITTEE**

Micron Technology Inc.

**2. PROJECT**

Initial Permit to Construct – Semiconductor Manufacturing Facility

**3. MAILING ADDRESS**

P.O. Box 6 MS 01-602

**CITY**

Boise

**STATE**

ID

**ZIP**

83707-0006

**4. FACILITY CONTACT**

Beth Elroy

**TITLE**

Environmental Manager

**TELEPHONE**

(208) 368-4000

**5. RESPONSIBLE OFFICIAL**

Dale Eldridge

**TITLE**

Director of Facilities

**TELEPHONE**

(208) 368-4000

**6. EXACT PLANT LOCATION**

1401 N. Kings Road, Nampa, Idaho

**COUNTY**

Canyon

**7. GENERAL NATURE OF BUSINESS & KINDS OF PRODUCTS**

Semiconductor Manufacturing and Support Operations

**8. GENERAL CONDITIONS**

This permit is issued according to IDAPA 58.01.01.200, Rules for the Control of Air Pollution in Idaho, and pertains only to emissions of air contaminants regulated by the state of Idaho and to the sources specifically allowed to be constructed or modified by this permit.

This permit (a) does not affect the title of the premises upon which the equipment is to be located; (b) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from, or arising out of the design, installation, maintenance, or operation of the proposed equipment; (c) does not release the permittee from compliance with other applicable federal, state, tribal, or local laws, regulations, or ordinances; (d) in no manner implies or suggests that the Department of Environmental Quality (DEQ) or its officers, agents, or employees, assume any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from, or arising out of design, installation, maintenance, or operation of the proposed equipment.

This permit will expire if construction has not begun within two years of its issue date or if construction is suspended for one year in accordance with IDAPA 58.01.01.211.02.

This permit has been granted on the basis of design information presented with its application. Changes of design or equipment that do not meet the applicable requirements established in this permit or the requirements of IDAPA 58.01.01.181, may require DEQ approval pursuant to the Rules for the Control of Air Pollution in Idaho, IDAPA 58.01.01.200, et seq.

  
**TONI HARDESTY, DIRECTOR  
DEPARTMENT OF ENVIRONMENTAL QUALITY**

**DATE ISSUED:** July 14, 2006

**Date Expires:** July 14, 2011

## **Table of Contents**

<b>ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE.....</b>	<b>3</b>
<b>1. PERMIT TO CONSTRUCT SCOPE.....</b>	<b>4</b>
<b>2. FACILITY EMISSIONS CAP CONDITIONS .....</b>	<b>5</b>
<b>3. SEMICONDUCTOR MANUFACTURING OPERATIONS .....</b>	<b>8</b>
<b>4. POLLUTANTS REGULATED BY IDAPA 58.01.01.585-586.....</b>	<b>11</b>
<b>5. NSPS BOILER.....</b>	<b>12</b>
<b>6. PERMIT TO CONSTRUCT GENERAL PROVISIONS.....</b>	<b>13</b>

## Acronyms, Units, and Chemical Nomenclature

<b>AAC</b>	<b>acceptable ambient concentration for non-carcinogens</b>
<b>AACC</b>	<b>acceptable ambient concentration for carcinogens</b>
<b>acfm</b>	<b>actual cubic feet per minute</b>
<b>AFS</b>	<b>AIRS Facility Subsystem</b>
<b>AIRS</b>	<b>Aerometric Information Retrieval System</b>
<b>AQCR</b>	<b>Air Quality Control Region</b>
<b>Btu</b>	<b>British thermal unit</b>
<b>CFR</b>	<b>Code of Federal Regulations</b>
<b>CO</b>	<b>carbon monoxide</b>
<b>DEQ</b>	<b>Department of Environmental Quality</b>
<b>dscf</b>	<b>dry standard cubic feet</b>
<b>EPA</b>	<b>U.S. Environmental Protection Agency</b>
<b>FEC</b>	<b>facility emissions cap</b>
<b>gpm</b>	<b>gallons per minute</b>
<b>HAPs</b>	<b>hazardous air pollutants</b>
<b>IDAPA</b>	<b>a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act</b>
<b>lb/hr</b>	<b>pound per hour</b>
<b>MMBtu</b>	<b>million British thermal units</b>
<b>NO<sub>2</sub></b>	<b>nitrogen dioxide</b>
<b>NO<sub>x</sub></b>	<b>nitrogen oxides</b>
<b>NSPS</b>	<b>New Source Performance Standards</b>
<b>Pb</b>	<b>lead</b>
<b>PM</b>	<b>particulate matter</b>
<b>PM<sub>10</sub></b>	<b>particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers</b>
<b>PTC</b>	<b>permit to construct</b>
<b>PTE</b>	<b>potential to emit</b>
<b>scf</b>	<b>standard cubic feet</b>
<b>SIC</b>	<b>Standard Industrial Classification</b>
<b>SIP</b>	<b>State Implementation Plan</b>
<b>SM</b>	<b>synthetic minor</b>
<b>SO<sub>2</sub></b>	<b>sulfur dioxide</b>
<b>SO<sub>x</sub></b>	<b>sulfur oxides</b>
<b>TAPs</b>	<b>toxic air pollutants</b>
<b>T/yr</b>	<b>tons per year</b>
<b>µg/m<sup>3</sup></b>	<b>micrograms per cubic meter</b>
<b>UTM</b>	<b>Universal Transverse Mercator</b>
<b>VOC</b>	<b>volatile organic compound</b>

**AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-060013**

<b>Permittee:</b>	Micron Technology, Inc.	<b>Facility ID No.</b> 027-00095	<b>Date Issued:</b>	July 14, 2006
<b>Location:</b>	Nampa, Idaho		<b>Date Expires:</b>	July 14, 2011

**1. PERMIT TO CONSTRUCT SCOPE*****Purpose***

- 1.1 This permit allows for the construction of Micron Technology, Inc.'s (MTI's) semiconductor manufacturing facility and related operations at 1401 N. Kings Rd. Nampa, Idaho. MTI proposes to install semiconductor manufacturing equipment and associated heating, cooling, support operations, and pollution control equipment.

***Regulated Sources***

- 1.2 Table 1.1 lists all sources of regulated emissions in this PTC.

**Table 1.1 SUMMARY OF REGULATED SOURCES**

<b>Permit Section</b>	<b>Source Description</b>	<b>Emissions Control(s)</b>
2	<u>Facility Emissions Cap</u> (The facility emissions cap applies to all regulated sources at the facility, including boilers, generators, and manufacturing operations)	Wet scrubbers VOC abatement units
3	<u>Semiconductor Manufacturing and Support Operations</u> (Includes, but is not limited to, silicon wafer cleaning, diffusion, photolithography, etch, doping, metallization, and assembly)	Wet scrubbers VOC abatement units
4	Pollutants regulated by IDAPA 58.01.01.585-586	Wet scrubbers VOC abatement units
5	NSPS boilers	Natural gas fuel only

**AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-060013**

<b>Permittee:</b>	Micron Technology, Inc.	<b>Facility ID No.</b> 027-00095	<b>Date Issued:</b>	July 14, 2006
<b>Location:</b>	Nampa, Idaho		<b>Date Expires:</b>	July 14, 2011

**2. FACILITY EMISSIONS CAP CONDITIONS**

This permit authorizes changes to the facility, which increase emissions of criteria pollutants and HAPs for those changes that comply with the terms and conditions of this permit and that meet the requirements of IDAPA 58.01.01.181.

**Table 2.1 FACILITY EMISSIONS DESCRIPTION**

Emissions Unit(s) / Process(es)	Emissions Control Device	Emissions Point
Boilers (natural gas-fired) Existing – three 8.9 MMBtu/hr boilers Proposed – new boiler up to 29 MMBtu/hr	Natural gas fuel only	Boiler stack
Manufacturing Process	Wet scrubbers VOC abatement units	Scrubber stacks, VOC abatement unit stacks
Emergency Generators	None	Generator stacks

**Emissions Limits****2.1 Criteria Pollutant and HAP Facility Emissions Cap**

The PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOC, Pb, and total HAP emissions from the Micron facility shall not exceed any corresponding facility emissions cap (FEC) limits listed in Table 2.2. Hazardous air pollutants are those listed in or pursuant to Section 112(b) of the Clean Air Act.

**Table 2.2 FEC EMISSIONS LIMITS**

Source Description	PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Pb	Individual HAPs	Aggregate HAPs
	T/yr	T/yr	T/yr	T/yr	T/yr	lb/yr	T/yr	T/yr
Total Facility Emissions Cap	20	6	66	73	46	60	<10	<25

**Monitoring and Recordkeeping Requirements****2.2 Criteria Pollutant Facility Emissions Cap Compliance**

- 2.2.1 For all combustion sources, MTI shall calculate and record rolling 12-month total NO<sub>x</sub>, CO, SO<sub>2</sub>, VOC, PM<sub>10</sub>, and Pb emissions based on fuel consumption for natural gas combustion sources and based on hours of operation for emergency generators using the emission factors identified in the PTC application or applicable manufacturer's data. Monthly estimates of actual emissions shall be used to calculate rolling 12-month total emissions of each pollutant to demonstrate compliance with the annual emission limits in Permit Condition 2.1. Records shall be maintained onsite for a period of at least five years and shall be made available to DEQ representatives upon request.
- 2.2.2 For semiconductor manufacturing process sources, MTI shall maintain records of materials used in the manufacturing process to estimate production-related emissions of PM<sub>10</sub>, VOCs, and Pb on a monthly basis. Monthly estimates of actual emissions shall be used to calculate rolling 12-month total emissions of each pollutant. Estimates of actual emissions may take into account wet scrubber and VOC abatement unit control efficiency as provided by the wet scrubber or VOC abatement unit manufacturer or applicable engineering data. Production-related PM<sub>10</sub>, VOC, and Pb emissions shall be added to combustion emissions calculated as required by Permit Condition 2.2.1 to determine compliance with the

**AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-060013**

<b>Permittee:</b>	Micron Technology, Inc.	<b>Facility ID No.</b> 027-00095	<b>Date Issued:</b>	July 14, 2006
<b>Location:</b>	Nampa, Idaho		<b>Date Expires:</b>	July 14, 2011

PM<sub>10</sub>, VOC, and Pb FECs established by Permit Condition 2.1. Records shall be maintained onsite for a period of at least five years and shall be made available to DEQ representatives upon request.

**2.3 HAP Facility Emissions Cap Compliance**

- 2.3.1 For manufacturing process and combustion sources, MTI shall calculate and record rolling 12-month totals of each HAP known to be emitted. Monthly estimates of actual emissions shall be used to calculate rolling 12-month total emissions of each pollutant to demonstrate compliance with the annual emissions limits in Permit Condition 2.1. Estimates of actual emissions may account for wet scrubber and VOC abatement unit control efficiency as provided by the scrubber or VOC abatement unit manufacturer. Records shall be maintained onsite for a period of at least five years and shall be made available to DEQ representatives upon request.

***Reporting Requirements*****2.4 Reporting**

- 2.4.1 Once per annum, MTI shall report to DEQ the rolling 12-month total criteria pollutant and HAP emissions recorded under Permit Conditions 2.2 and 2.3. The report shall be for the period July 1<sup>st</sup> through June 30<sup>th</sup> and shall be due on or before September 1<sup>st</sup> of each calendar year. All reports must be certified in accordance with IDAPA 58.01.01.123.

***General FEC Conditions*****2.5 Notice and Record-Keeping of Estimates of Ambient Concentrations**

- 2.5.1 For facility changes that comply with the terms and conditions establishing the FEC, but are not included in the estimate of ambient concentration analysis approved for the permit establishing the FEC, the permittee shall review the estimate of ambient concentration analysis. In the event the facility change would result in a significant contribution above the design concentration determined by the estimate of ambient concentration analysis approved for the permit establishing the FEC, but does not cause or significantly contribute to a violation to any ambient air quality standard, the permittee shall provide notice to DEQ in accordance with IDAPA 58.01.01.181.01.b. The permittee shall record and maintain documentation of the review on site.
- 2.5.2 Estimates of ambient concentrations shall be consistent with the estimate of ambient concentration analysis approved for the permit establishing the FEC unless DEQ determines that other technical methods are appropriate. Ambient impact analyses conducted by the permittee to comply with IDAPA 58.01.01.181 after December 9, 2006 shall be performed using the most current EPA-approved regulatory guideline model (such as AERMOD-Prime). The permittee is strongly encouraged to submit a modeling protocol to DEQ for review and approval prior to conducting the first modeling analyses based on the regulatory air model that is used to comply with IDAPA 58.01.01.181. The permittee shall include any changes to the facility that were not included in the originally approved estimate of ambient concentration analysis.



**AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-060013**

<b>Permittee:</b>	Micron Technology, Inc.	<b>Facility ID No.</b> 027-00095	<b>Date Issued:</b>	July 14, 2006
<b>Location:</b>	Nampa, Idaho		<b>Date Expires:</b>	July 14, 2011

- 2.5.3 The permittee shall submit a revised ambient impact modeling analysis using the most current regulatory air model for the renewal of this permit in accordance with IDAPA 58.01.01.177.02.d and IDAPA 58.01.01.179.02. The permittee is strongly encouraged to submit a modeling protocol to the Department for review and approval prior to submitting the modeling analysis with the FEC permit renewal application.

**AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-060013**

<b>Permittee:</b>	Micron Technology, Inc.	<b>Facility ID No.</b> 027-00095	<b>Date Issued:</b>	July 14, 2006
<b>Location:</b>	Nampa, Idaho		<b>Date Expires:</b>	July 14, 2011

**3. SEMICONDUCTOR MANUFACTURING OPERATIONS****3.1 Process Description**

Semiconductor manufacturing and support operations performed at this facility include, but are not limited to: photolithography, cleaning, diffusion, wet etch, dry etch, implant, metallization, and assembly.

**3.2 Emissions Control Description**

**Table 3.1 SEMICONDUCTOR MANUFACTURING AND SUPPORT OPERATIONS DESCRIPTION**

<b>Emissions Unit(s) / Process(es)</b>	<b>Emissions Control Device</b>	<b>Emissions Point</b>
Manufacturing Process	Wet scrubbers VOC abatement units	Scrubber stacks, VOC abatement unit stacks General exhaust stacks

***Emissions Limits*****3.3 Opacity Limit**

Emissions from any stack, vent, or functionally equivalent opening at the facility shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as required by IDAPA 58.01.01.625. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625.

***Operating Requirements*****3.4 Wet Scrubber Operating Conditions**

- 3.4.1 MTI shall properly operate and maintain the wet scrubbers, thereby limiting the facility's potential to emit regulated air pollutants and substances regulated by IDAPA 58.01.01.585 and 586.
- 3.4.2 The minimum water recirculation rate of the wet scrubbers shall be maintained. MTI shall install and operate instruments to monitor the scrubbing water recirculation rate.
- 3.4.3 The scrubbing water pH shall be properly maintained. MTI shall install and operate instruments to monitor and adjust the pH of the scrubbing water.
- 3.4.4 Within 90 days of permit issuance MTI shall develop a log that contains the minimum scrubbing water recirculation flow rate and pH required to maintain proper performance for each wet scrubber based on manufacturer's data or applicable engineering data. If an existing scrubber is modified so that the proper scrubber flow rate or pH is changed, or a new scrubber is installed, the log shall be updated to reflect the minimum recirculation flow rate and pH for the modified or new scrubber. The log shall be maintained on-site and made available to DEQ representatives upon request.
- 3.4.5 MTI shall take corrective action as expeditiously as practicable whenever there is scrubber downtime or malfunction. When calculating emissions to determine compliance with Permit Condition 2.1 or 4.1, MTI shall use uncontrolled emissions rates for pollutants normally emitted through the scrubber stacks during time periods when the scrubbers are not operating. Downtime of a scrubber unit or operation outside the

**AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-060013**

<b>Permittee:</b>	<b>Micron Technology, Inc.</b>	<b>Facility ID No. 027-00095</b>	<b>Date Issued:</b>	<b>July 14, 2006</b>
<b>Location:</b>	<b>Nampa, Idaho</b>		<b>Date Expires:</b>	<b>July 14, 2011</b>

parameters established in this permit shall not constitute a violation of this permit as long as the calculated uncontrolled emissions rates do not exceed any limit established by this permit.

**3.5 VOC Abatement Unit Operating Conditions**

For the purposes of this permit to construct, certain terms are defined as follows:

- "Coat track" means a semiconductor manufacturing tool that performs a process called coat bake in the photolithography area of the facility.
- "Coat bake" means a batch process where liquids potentially containing volatile organic compounds (VOCs) are applied to the surface of silicon wafers and then cured.
- "Facility" means the semiconductor manufacturing facility owned and operated by MTI in Nampa, Idaho.
- "VOC abatement unit" means a system that gathers, concentrates, and oxidizes volatile organic compounds (VOCs).

- 3.5.1 MTI shall operate VOC abatement units to control emissions from coat tracks, thereby limiting the facility's potential to emit VOCs and substances regulated by IDAPA 58.01.01.585 and 586.
- 3.5.2 MTI shall connect all coat tracks installed at the facility to a VOC abatement unit.
- 3.5.3 MTI shall, at all times, properly operate and maintain the VOC abatement units.
- 3.5.4 MTI shall operate the VOC abatement units according to manufacturers' recommendations as follows:
- a) Oxidation temperature shall be 1,350 degrees F or greater.
  - b) Desorption temperature shall be 340 degrees F or greater.
  - c) Each unit shall not be operated outside of the manufacturer's design capacity.
- 3.5.5 When calculating emissions to determine compliance with Permit Condition 2.1 or 4.1, MTI shall use uncontrolled emission rates for pollutants normally emitted through the VOC abatement units for time periods when the VOC abatement unit is not operating or is operating outside the parameters listed in Permit Condition 3.5. Downtime of the VOC abatement unit or operation outside of the parameters established in this permit shall not constitute a violation of this permit as long as the calculated uncontrolled emissions rates do not exceed any limits established by this permit.

***Monitoring and Recordkeeping Requirements*****3.6 Wet Scrubbers**

- 3.6.1 MTI shall record the dates and time that any scrubber exhaust is routed to the atmosphere without control due to equipment breakdown, or routine maintenance. If uncontrolled emissions are determined to exceed any limit in Permit Condition 2.1, the event shall be reported as excess emissions in accordance with IDAPA 58.01.01.131.

**AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-060013**

<b>Permittee:</b>	Micron Technology, Inc.	<b>Facility ID No.</b> 027-00095	<b>Date Issued:</b>	July 14, 2006
<b>Location:</b>	Nampa, Idaho		<b>Date Expires:</b>	July 14, 2011

3.6.2 Once per month MTI shall record the scrubbing water pH and flow rate for each scrubber. These records shall note redundant scrubbers that are not operating during the monthly inspection.

**3.7 VOC Abatement Units**

3.7.1 MTI shall record the date and time that any VOC abatement unit exhaust is routed to the atmosphere without control due to equipment breakdown or routine maintenance. If uncontrolled emissions are determined to exceed any limit in Permit Condition 2.1, the event shall be reported as excess emissions in accordance with IDAPA 58.01.01.131.

3.7.2 MTI shall continuously monitor the parameters set forth in Permit Condition 3.5.4 a. and b. Once per month, MTI shall record the parameters set forth in Permit Condition 3.5.4 a. and b.

# AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-060013

<b>Permittee:</b>	Micron Technology, Inc.	<b>Facility ID No.</b> 027-00095	<b>Date Issued:</b>	July 14, 2006
<b>Location:</b>	Nampa, Idaho		<b>Date Expires:</b>	July 14, 2011

## 4. POLLUTANTS REGULATED BY IDAPA 58.01.01.585-586

### 4.1 TAP Compliance

- 4.1.1 This permit authorizes MTI to make modifications to the facility which change emissions of pollutants listed in IDAPA 58.01.01.585 and 586. The procedures in IDAPA 58.01.01.223 are not applicable provided that MTI complies with this permit condition. MTI shall monitor material usage to calculate monthly average hourly process emissions of substances listed at IDAPA 58.01.01.585 and 586. If the increase in hourly emissions ( $E_i$ , from equation 4.1) exceeds 80% of the AAC or AACC for each respective pollutant ( $E_{ia}$ , from equation 4.2 or 4.3), MTI shall conduct a refined modeling analysis for the pollutant to demonstrate compliance with the respective AAC or AACC.

- a)  $E_i$  is calculated from the following equation;

$$E_i = \frac{E_m}{H_m} \quad (\text{Equation 4.1})$$

- b) For substances listed in IDAPA 58.01.01.585;

$$E_{ia} = \frac{\left( AAC * 0.8 \times 1000 \frac{\mu g}{mg} \right)}{CQ_{24-hr}} \quad (\text{Equation 4.2})$$

- c) For substances listed in IDAPA 58.01.01.586:

$$E_{ia} = \frac{(AACC * 0.8)}{CQ_{annual}} \quad (\text{Equation 4.3})$$

Where;

AAC = Acceptable ambient concentration for non-carcinogens ( $mg/m^3$ )

AACC = Acceptable ambient concentration for carcinogens ( $ug/m^3$ )

$E_{ia}$  = Increase in hourly emissions that triggers a refined modeling analysis (lb/hr)

$E_i$  = Calculated increase in hourly emissions (lb/hr)

$E_m$  = Calculated monthly emissions rate of each pollutant used (lb/month)

$H_m$  = Hours in the month of the calculation (hours/month)

$CQ_{24-hr}$  = Chi/Q value for 24-hour averaging period =  $4.998 \mu g/m^3$  per lb/hr

$CQ_{annual}$  = Chi/Q value for annual averaging period =  $0.737 \mu g/m^3$  per lb/hr

The most recent five years of calculated emission rates and calculations shall be maintained onsite and made available to DEQ representatives upon request.

**AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-060013**

<b>Permittee:</b>	Micron Technology, Inc.	<b>Facility ID No.</b> 027-00095	<b>Date Issued:</b>	July 14, 2006
<b>Location:</b>	Nampa, Idaho		<b>Date Expires:</b>	July 14, 2011

**5. NSPS BOILER****5.1 Process Description**

MTI plans to install additional natural gas boiler capacity, up to 29 MMBtu/hr per boiler.

**5.2 Emissions Control Description**

**Table 5.1 NSPS BOILER DESCRIPTION**

<b>Emissions Unit(s) / Process(es)</b>	<b>Emissions Control Device</b>	<b>Emissions Point</b>
Boiler(s) (rated capacity between 10 and 29 MMBtu/hr per boiler)	Natural gas fuel only	Boiler stack

**5.3 New Source Performance Standards for Boilers**

- 5.3.1 For installation of a new natural gas fired boiler with a rated capacity greater than 10 MMBtu/hr and less than 30 MMBtu/hr, MTI shall comply with the applicable requirements in 40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units as set forth below:
- 5.3.2 For each boiler subject to NSPS Subpart Dc, MTI shall record and maintain records of the amounts of each fuel combusted during each day.
- 5.3.3 The permittee shall submit the following information to DEQ for each NSPS-affected natural gas boiler:
- The design heat input capacity of the boiler and identification of fuels to be combusted in the boiler.
  - The actual date of initial startup of the boiler, postmarked within 15 days after such day.
- 5.3.4 The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of each NSPS-affected natural gas boiler.
- 5.3.5 For each boiler subject to NSPS Subpart Dc, MTI shall submit notification of the date of construction in accordance with 40 CFR 60.48c.

**AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-060013**

<b>Permittee:</b>	<b>Micron Technology, Inc.</b>	<b>Facility ID No. 027-00095</b>	<b>Date Issued:</b>	<b>July 14, 2006</b>
<b>Location:</b>	<b>Nampa, Idaho</b>		<b>Date Expires:</b>	<b>July 14, 2011</b>

**6. PERMIT TO CONSTRUCT GENERAL PROVISIONS**

1. The permittee has a continuing duty to comply with all terms and conditions of this permit. All emissions authorized herein shall be consistent with the terms and conditions of this permit and the Rules for the Control of Air Pollution in Idaho. The emissions of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit and the Rules for the Control of Air Pollution in Idaho, and the Environmental Protection and Health Act, Idaho Code §39-101, et seq. Downtime of any scrubber unit, VOC abatement unit, or operation outside of the parameters for scrubber and VOC abatement units established in this permit shall not constitute a violation of this permit as long as the calculated uncontrolled emissions do not exceed any limits established by this permit.
2. The permittee shall at all times (except as provided in the Rules for the Control of Air Pollution in Idaho) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.
3. Upon presentation of credentials, the permittee shall allow DEQ or an authorized representative of DEQ to do the following:
  - a. Enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records are kept under conditions of this permit;
  - b. Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
  - d. As authorized by the Idaho Environmental Protection and Health Act, sample or monitor, at reasonable times, substances or parameters for the purpose of determining or ensuring compliance with this permit or applicable requirements.
4. Nothing in this permit is intended to relieve or exempt the permittee from compliance with any applicable federal, state, or local law or regulation, except as specifically provided herein.
5. The permittee shall furnish DEQ written notifications as follows in accordance with IDAPA 58.01.01.211.01 and 211.03:
  - A notification of the anticipated date of initial start-up of the stationary source or facility not more than sixty days or less than thirty days prior to such date;
  - A notification of the actual date of initial start-up of the stationary source or facility within fifteen days after such date; and
6. If performance testing (air emissions source test) is required by this permit, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test date or shorter time period as approved by DEQ. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests that such testing not be performed on weekends or state holidays.

All performance testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, at least 30 days prior to conducting

**AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-060013**

<b>Permittee:</b>	<b>Micron Technology, Inc.</b>	<b>Facility ID No. 027-00095</b>	<b>Date Issued:</b>	<b>July 14, 2006</b>
<b>Location:</b>	<b>Nampa, Idaho</b>		<b>Date Expires:</b>	<b>July 14, 2011</b>

any performance test, the permittee is encouraged to submit a performance test protocol to DEQ for approval. The written protocol shall include a description of the test method(s) to be used, an explanation of any or unusual circumstances regarding the proposed test, and the proposed test schedule for conducting and reporting the test.

Within 30 days following the date in which a performance test required by this permit is concluded, the permittee shall submit to DEQ a performance test report. The written report shall include a description of the process, identification of the test method(s) used, equipment used, all process operating data collected during the test period, and test results, as well as raw test data and associated documentation, including any approved test protocol.

7. The provisions of this permit are severable, and if any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.
8. In accordance with IDAPA 58.01.01.123, all documents submitted to DEQ, including, but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certification shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.